

AMENDMENTS TO THE CLAIMS

Claim 1 (currently amended): A wafer processing system comprising:

a loading station;

a process chamber maintained at a predetermined pressure during normal operation, the process chamber having a plurality of processing stations; and

a first single-wafer load lock having a single wafer support, the first single-wafer load lock being coupled to receive a wafer originating from the loading station, the first single-wafer load lock including a transfer mechanism configured to directly transfer a wafer between the first single-wafer load lock and the process chamber along a substantially straight path[. . .];

a second single-wafer load lock having a single wafer support, the second single-wafer load lock including a transfer mechanism configured to directly transfer a wafer between the second single-wafer load lock and the process chamber; and

a pump coupled only to the first and second single-wafer load locks, the pump being located locally on the wafer processing system.

Claim 2 (cancelled)

Claim 3 (cancelled)

Claim 4 (original): The system of claim 1 wherein the loading station includes a front-opening unified pod (FOUP).

Claim 5 (original): The system of claim 1 further comprising a robot between the loading station and the first single-wafer load lock.

Claims 6-12 (cancelled)

Claim 13 (currently amended): A wafer processing system comprising:

- a loading station;
- a process chamber maintained at vacuum during normal processing;
- a plurality of load locks, each of the plurality of load locks having an opening in direct communication with the process chamber and another opening in communication with the loading station, each of the plurality of load locks including a single wafer support and a transfer mechanism configured to transfer a wafer between a load lock and the process chamber; and
- a robot between the loading station and the plurality of load locks, the robot capable of transferring a wafer from the loading station to a load lock in the plurality of load locks[[.]];
 - wherein each of the plurality of load locks includes a single pedestal having an integrated cooling unit.

Claim 14-16 (cancelled)

Claim 17 (original): The system of claim 13 wherein the robot is an atmospheric robot.

Claim 18 (original): The system of claim 13 wherein the loading station is a front-opening unified pod (FOUP).

Claim 19 (previously presented): The system of claim 13 wherein the process chamber has a plurality of processing stations.

Claim 20 (original): The system of claim 19 wherein at least one of the plurality of processing stations is capable of heating a supported wafer.

Claim 21 (new): A wafer processing system comprising:

- a loading station;
- a process chamber maintained at a predetermined pressure during normal operation, the process chamber having a plurality of processing stations; and

a first single-wafer load lock having a single wafer support, the first single-wafer load lock being coupled to receive a wafer originating from the loading station, the first single-wafer load lock including a transfer mechanism configured to directly transfer a wafer between the first single-wafer load lock and the process chamber along a substantially straight path;

wherein the single wafer support of the first single-wafer load lock includes a pedestal having an integral cooling unit.

Claim 22 (new): A wafer processing system comprising:

a loading station;
a process chamber maintained at a predetermined pressure during normal operation, the process chamber having a plurality of processing stations; and
a first single-wafer load lock having a single wafer support, the first single-wafer load lock being coupled to receive a wafer originating from the loading station, the first single-wafer load lock including a transfer mechanism configured to directly transfer a wafer between the first single-wafer load lock and the process chamber along a substantially straight path;

wherein the single wafer support of the first single-wafer load lock includes a single pedestal having an integral heating unit.

Claim 23 (new): A wafer processing system comprising:

a loading station;
a process chamber maintained at vacuum during normal processing;
a plurality of load locks, each of the plurality of load locks having an opening in direct communication with the process chamber and another opening in communication with the loading station, each of the plurality of load locks including a single wafer support and a transfer mechanism configured to transfer a wafer between a load lock and the process chamber; and

a robot between the loading station and the plurality of load locks, the robot capable of transferring a wafer from the loading station to a load lock in the plurality of load locks;

wherein each of the plurality of load locks includes a single pedestal having an integrated heating unit.

Claim 24 (new): The system of claim 23 wherein the loading station is a front-opening unified pod (FOUP).

Claim 25 (new): The system of claim 23 wherein the process chamber has a plurality of processing stations.

Claim 26 (new): The system of claim 25 wherein at least one of the plurality of processing stations is capable of heating a supported wafer.

Claim 27 (new): The system of claim 23 wherein the robot is an atmospheric robot.